

Thank you for your comment, David Hamilton.

The comment tracking number that has been assigned to your comment is GLMRISBRS50009.

Comment Date: January 29, 2015 13:57:05PM

GLMRIS Brandon Road Scoping

Comment ID: GLMRISBRS50009

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Attachment: TNC comments Brandon Road 1-29-2015.pdf

Comment Submitted:



January 29, 2015

US Army Corps of Engineers, Chicago District
231 S. LaSalle St. Suite 1500
ATTN: GLMRIS - Brandon Road Comments, Dave Wethington
Chicago, IL 60604

Dear Mr. Wethington:

Thank you for the opportunity to comment on the scope of the Great Lakes Mississippi River Interbasin Study (GLMRIS) - Brandon Road effort that was announced November 18, 2014. This effort will assess the viability of establishing a single point to control the one-way, upstream transfer of aquatic nuisance species from the Mississippi River Basin into the Great Lakes Basin near the Brandon Road Lock and Dam located in Joliet, Illinois. These comments are from The Nature Conservancy, a world-wide, non-partisan, science-based organization that seeks to conserve the lands and waters on which all life depends. We collaborate with business, the agricultural community, environmental and conservation groups, government, and local communities to develop and implement scientific and pragmatic solutions to conservation challenges.

The Nature Conservancy believes Aquatic Invasive Species (AIS) are a major economic and ecological threat to both the Mississippi River Basin and the Great Lakes. Measures must be implemented that: a) stop AIS from moving through Chicago Area Waterway System (CAWS) in both directions; b) stop all invasive species, not only Asian carp; and, c) must be implemented soon to be able to significantly reduce the risk of AIS movement through CAWS. These measures may include chemical treatment of water passing through the locks, or approach channel leading to the locks and carefully placed barriers. These measures will allow barge traffic to continue to reach any destination currently served, and have the potential to significantly reduce or prevent movement of AIS through CAWS

The Nature Conservancy strongly supports beginning the design and implementation of control measures at the Brandon Road Lock. The lock is strategically located to allow the construction of an effective one way barrier to the upstream movement of organisms that will significantly reduce the risk of AIS movement from the Mississippi River Basin into CAWS, and

subsequently into the Great Lakes. The only way floating, swimming or “hitchhiking” (attached to watercraft) AIS can move upstream into CAWS from the Illinois and Mississippi Rivers is through the lock.

Brandon Road Lock was also identified as a logical place to begin work by the CAWS Advisory Committee. This committee includes 32 public and private stakeholders that benefit from and have responsibilities related to the CAWS, as well as regional stakeholder groups representing commercial, recreational, and environmental interests. TNC is a member of the committee. The CAWS Advisory Committee in an August 25, 2014 letter (copy attached) to the Great Lakes Congressional Delegation called for the Corps to design a new engineered approach channel to the lock, and evaluate and design control measures to be deployed in the approach channel and lock.

Recommendation

In addition to the recommendations from the CAWS Advisory Committee, The Nature Conservancy makes the following recommendation:

The Corps should develop a *lock treatment process* to prevent AIS from entering (and moving through) the CAWS while at the same time not unduly impeding the movement of barges and other boat traffic between Lake Michigan and the Mississippi River. This process should include a combination of treatment methods to maximize the probability that aquatic taxa are prevented from moving through the lock, and enable timely movement of vessels through the lock. The process should include methods designed to discourage species from entering the lock or approach channel. However, to prevent the passage of AIS, any aquatic species that enters the lock or approach channel will need to be killed. The process should ideally be capable of eliminating a full range of aquatic taxonomic groups (invertebrates, fish, and plants) across all life stages, whether they are free swimming or attached to the vessels. To accomplish this and enable timely vessel passage, the treatment methods must be capable of achieving 100% lethality in a relatively short time. Finally, because the locks are working structures, treatment options need to be safe for people (lock workers and boat crews) and also not corrosive to vessels or the lock structure.

Development of Practical Treatment Options

The Nature Conservancy is working with the US Geological Survey (USGS) to identify the combination of treatment options capable of effectively killing 100% of organisms entering the lock structure, either in the water column or attached to the hulls of vessels. The work will determine the concentrations and contact times necessary for effective treatment. This information will be shared with the Corps as soon as possible.

Based on the information gathered so far, candidate treatments that are potentially lethal to the full range of taxa and life stages are:

43° C Water; Chlorine; Ozone; SeaKleen (Vitamin K); sodium thiosulfate, UV and Sodium Chloride.

To identify the most viable treatment options the following factors need to be considered:

- Suitability/viability for large-scale application treatments or recirculating treatments
- Rapid lethality (contact time required)
- Lethal to full range of taxa and life stages
- Impacts to vessels from a short term exposure
- Impacts to the lock structures
- Human Safety
- Ease of detoxification
- Environmental safety
- Likelihood of registration for use in water
- Availability/cost

These treatments are used for a variety of applications globally, including pathogen removal from water. Once USGS has gathered the above information, we believe it will provide a basis for the Corps to design practical treatment applications in the lock or approach channel.

Other Considerations

While 13 imminent invaders are reported in GLMRIS – previous assessments identified at least 29 known species that are capable of spreading into the Mississippi River Basin from Lake Michigan, and 10, including three species of Asian carp, threatening the Great Lakes via CAWS. There are other potential invasive species that have not yet entered either basin. This includes species like golden mussel or killer shrimp that are an ongoing threat to enter North America's freshwater ecosystems. GLMRIS limited its assessment to certain species, but the Great Lakes and Mississippi River basins need a solution that considers the full range of potentially invasive species. Stopping all AIS moving in both directions is vital to protecting two of the world's largest and most important freshwater resources.

Because of the breadth and uncertainty of the AIS threat, it is critical to stop all invasive species, not only Asian carp. Brandon Road lock is an excellent location for a one-way stop from the Mississippi River side, but additional work must be done to create the one-way stop from the Lake Michigan side. And these solutions must be implemented soon to be able to significantly reduce the risk of AIS movement through CAWS.

What is learned in designing a *lock treatment process* at Brandon Road Lock could be applied elsewhere in CAWS to help create the one-way stop from the Great Lakes. And there may be other applications to stop AIS from spreading farther upstream in Mississippi River tributaries, such as in Minnesota and Ohio.

Again thank you for the opportunity to comment on the GLMRIS Brandon Road scope of work.

Sincerely,



David A. Hamilton
Senior Policy Director, Great Lakes Project
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August 25, 2014

Dear Members of the Great Lakes Congressional Delegation:

This letter is written on behalf of the Advisory Committee for the Chicago Area Waterway System (CAWS). The committee includes representatives from 32 public and private stakeholders that benefit from and have responsibilities related to the CAWS, as well as regional stakeholder groups representing commercial, recreational, and environmental interests. We ask for your support to 1) direct the Army Corps of Engineers to take action on the requests below, and 2) to fund those actions. Further, we request that the studies outlined below result in decision-making documents that provide an actionable path forward for short-term measures that will reduce the risk of aquatic invasive species including Asian carp (AIS) reaching the Great Lakes from the Mississippi River system.

As a follow up to the Great Lakes and Mississippi River Interbasin Study (GLMRIS), the Advisory Committee is committed to finding a two-way, long-term solution that prevents the inter-basin transfer of AIS while also maintaining or enhancing transportation, maritime commerce, water quality, recreation, and flood protection in the region. The Advisory Committee is working to develop consensus recommendations on a long-term solution by December 2015. The Committee also supports the ongoing work of the Asian Carp Regional Coordinating Committee (ACRCC). The investments we are proposing below will develop and demonstrate control technologies for near-term actions to reduce the risk of transfer of AIS into the Great Lakes.

The Advisory Committee believes that the Brandon Road lock and dam is an important site for a demonstration of additional one-way measures to reduce the risk of upstream movement of AIS into both the CAWS and the Des Plaines River, while maintaining efficient navigation.¹ Control measures at Brandon Road can provide a degree of risk reduction now, and may be consistent with the ultimate long-term solution. This site can also serve as a valuable national proving ground to demonstrate technologies that can be used in other areas – such as the Ohio and Upper Mississippi rivers – to prevent the expansion of AIS. To be effective, an engineered channel at Brandon Road will be required and a full set of control technologies to be deployed there will need to be evaluated.

In addition to the consideration of short-term measures at Brandon Road, the Advisory Committee requests that additional studies be initiated now to evaluate the potential for new lock configurations and gate systems that are identified in the GLMRIS report. While any new lock configuration would be considered as part of a long-term solution, more work is required to fully understand this possibility.

The Advisory Committee asks that Congress support and fund the following:

1. **Design of a new engineered channel to be constructed in the approach to the Brandon Road lock.** The existing approach channels to the Brandon Road lock may lend themselves to construction of a new engineered channel. Such a channel would enable deployment of control technologies with greater effectiveness due to the narrower and more concentrated area on which they would be implemented.

¹ Efficient navigation means that the flow of traffic will not be significantly hindered during construction or after completion of construction by the new structures or technologies.

2. **Evaluation, engineering, and design of control technologies to deploy in the approach channel and the Brandon Road lock structure.** Several “add-on” control technologies are being evaluated as part of the Asian Carp Control Strategy Framework. These technologies could be used in the approach channel to deter AIS from entering the lock along with other control technologies in the existing lock to prevent AIS moving further upstream towards Lake Michigan. The Army Corps of Engineers, in collaboration with other federal and state agencies, should complete the evaluation, engineering, and design of appropriate control technologies that could be deployed at the Brandon Road lock and approach channel. Any technologies that are tested and/or employed at Brandon Road must take into account the important ecological value of the location, as the Brandon Road lock tail waters are critical habitat for this segment of the Des Plaines River.
3. **Research to further evaluate reconfiguring locks as a means to control aquatic invasive species.** The GLMRIS report proposed a new lock configuration and gate system that would allow boat traffic to pass between water bodies and that would exchange water in a way to prevent the passage of aquatic organisms. If such a concept is proven to be feasible, it could be deployed in the CAWS as part of a long-term solution. It could also be used in other river systems to prevent the movement of AIS. However, significant questions remain regarding its potential effectiveness. One concern is whether such locks could adequately flush out species or whether additional treatment technologies will be required. Further, the overall cost and time frame for deployment and impacts on the water system as a whole and commercial navigation need to be identified before proceeding to full engineering and design. The Advisory Committee supports initial research and design necessary to further evaluate the concept’s effectiveness in preventing AIS transfer.

Request: The Advisory Committee requests that Congress provide \$8 million, and additional funding levels as appropriate, to the Army Corps of Engineers in FY 2015 to conduct the above studies. Upon approval of funding, the Army Corps of Engineers should be directed to provide to Congress, within six months, a detailed schedule and cost estimate for completing the necessary studies for the above projects. The studies will result in design and engineering analysis as well as projected design and construction costs, timelines, and any new legislative authority required to implement the projects.

The Army Corps of Engineers should be instructed to complete these investigations within two years and to coordinate with other federal and state agencies and non-federal partners via the Asian Carp Regional Coordinating Committee and to report to the Advisory Committee. In addition to these specific investigations and reports, the Advisory Committee asks that the Army Corps of Engineers provide Congress with a decision-making document that incorporates the Corps’ traditional principles, guidelines and policies, including the evaluation of alternatives, selection of a recommended plan, and compliance with applicable environmental statutes. This should be sufficient to enable Congress to authorize and fund, and the Army Corps of Engineers to proceed to implementation of, a recommended plan for near-term measures.

These requests reflect the consensus of the Advisory Committee. We appreciate your support for these urgent and immediate actions to strengthen protections against the movement of AIS into the Great Lakes.

Sincerely,

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